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12-16-02
DEC 23 2002
OFFICE
S/N 09/490,748

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1-7-03
D. BEN
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Mark P. Bendett et al.

Examiner: Jeffrey N. Zahn

Serial No.: 09/490,748

Group Art Unit: 2828

Filed: January 25, 2000

Docket: 1731.002US1

Title: RARE-EARTH DOPED PHOSPHATE-GLASS LASERS AND ASSOCIATED METHODS

AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111

Commissioner for Patents
Washington, D.C. 20231

Applicant has reviewed the Office Action mailed on August 14, 2002. Please amend the above-identified patent application as follows.

This response is accompanied by a Petition, as well as the appropriate fee, to obtain a one-month extension of the period for responding to the Office action, thereby moving the deadline for response from November 14, 2002 to December 16, 2002 (a Monday).

IN THE ABSTRACT OF THE DISCLOSURE

Please substitute the Abstract in the appendix entitled Clean Version of Abstract for the previous Abstract. Following is a marked-up version of the Abstract:

Apparatus and method for integrating [rare-earth doped] lasers and optics on glass substrates. An optical (e.g., laser) component formed from a glass substrate doped with a optically active lanthanides species with a plurality of waveguides defined by channels within the substrate. The laser component [may constitute] optionally includes a monolithic array of individual waveguides in which the waveguides [of the array] form laser resonator cavities with differing resonance characteristics. [The channels defining the waveguides are created by exposing a surface of the substrate to an ion-exchange solvent through a mask layer having a plurality of line apertures corresponding to the channels which are to be formed.] Another aspect is directed toward pumping the laser[. A laser component formed from a glass substrate doped with a laser species and having one or more substrate waveguides defined therein, and] wherein a superstrate waveguide cavity, or cladding, is positioned adjacent the substrate waveguide for supplying the latter with pump light. A[nother aspect provides a] closed crucible processing of optical